
A New Species of *Elvasia* (Ochnaceae) from Mesoamerica with Discussion of Subgeneric Classification and Phytogeography

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ABSTRACT. A new species of *Elvasia*, *E. bisepala*, is described from Belize and Honduras. *Elvasia bisepala* possesses unique characters that help to clarify subgeneric classification in the genus and further expands the distribution of *Elvasia* from South America well into Central America. The new species is described and illustrated, and the subgeneric classification of *Elvasia* is reviewed and revised.

The genus *Elvasia* has previously been considered to be exclusively South American and concentrated in the Amazon basin and the Guianas (Sastre & Lescure, 1978; Sastre, 1987), with a single species occurring in Bahia, Brazil (*E. tricarpellata* Sastre), and another recently collected in Panama and Costa Rica (*E. elvasioides* (Planchon) Gilg; pers. obs.). Currently there are 11 (including the new species described here) accepted species in the genus, which is distinguished from the rest of the Ochnaceae in the Neotropics by the uniovulate carpels that are united in fruit. During a review of material for the preparation of the Ochnaceae account for *Flora Mesoamericana*, a distinctive new species of *Elvasia* was found among recent collections from Belize and Honduras. The discovery of this taxon has clarified some previously ambiguous points about the infrageneric classification and biogeography of the genus.

Infrageneric classification in *Elvasia* has been based primarily on either stamen number and ovary morphology or fruit characteristics. Planchon (1846) divided the genus into two subgenera: subg. *Euelvasia* Planchon with 8 stamens and a 4-locular ovary, and subg. *Hostmannia* Planchon, with 18–20 stamens and a bilocular ovary. This same basic division was followed in Engler (1876). Van Tieghem (1902) elevated the genus to the rank of subfamily, and divided it into two tribes using fruit characteristics, the Elvasieae with star-shaped

fruits and the Hostmannieae without star-shaped fruits. Gilg (1893, 1925) more or less followed earlier floral-morphology-based schemes in dividing the genus into two sections: sect. *Euelvasia* with 8 stamens (including *E. calophyllea* DC. & *E. quinqueloba* Spruce ex Engler) and sect. *Hostmannia* with 18–20 stamens (including *E. hostmannia* (Planchon) Gilg & *E. essequibensis* Engler).

Revising the genus throughout its range, Dwyer (1943) described three sections based on various combinations of ovary locule and stamen number: sect. *Euelvasia* with 7–10 stamens and a 4–5-locular ovary (*E. calophyllea*, *E. quinqueloba*, and *E. canescens* (Van Tieghem) Gilg), sect. *Eussequibensa* Dwyer with 10–20 stamens and a 4–5-locular ovary (*E. essequibensis* and *E. brevipedicellata* Ule), and sect. *Hostmannia* with variable numbers of stamens and a bilocular ovary (*E. elvasioides* (Planchon) Gilg and *E. caurensis* Pittier). Cowan (1952) described *E. sphaerocarpa*, which he postulated was closely related to *E. essequibensis*. Due to its globose, unlobed fruit, he erected a new section for it, section *Conjunctipora* Cowan. Additional new species (Cuatrecasas, 1950; Sastre & Lescure, 1978) can be accommodated in Dwyer's subgeneric classification, with both *E. macrostipularis* Sastre & Lescure (closely related to *E. sphaerocarpa* but with only 2 carpels) and *E. oligandra* Cuatrecasas being placed in section *Hostmannia*.

Placement of *Elvasia tricarpellata* Sastre (Sastre, 1981), with its 3-carpellate ovary and 10–15 stamens, in Dwyer's classification is problematic. With the discovery of *E. bisepala*, described here, a simpler and less ambiguous subgeneric classification of the genus *Elvasia* can be proposed with two sections: section *Elvasia* (= *Euelvasia*), characterized by star-shaped fruits, and section *Hostmannia* (Planchon) Gilg, characterized by globular fruits. The component species in each section, with their

Table 1. Subgeneric classification and distribution of taxa in *Elvasia* (Ochnaceae).

Subgenus	Species	Distribution
<i>Elvasia</i>	<i>E. calophyllea</i> DC.	Colombia (Vaupes), Brazil (along the Rio Negro), Guyana
	<i>E. quinqueloba</i> Spruce ex Engler	Colombia (Río Guainia), Brazil (along the Rio Negro)
	<i>E. canescens</i> (van Tieghem) Gilg	Venezuela (upper Rio Orinoco), Brazil (along the Rio Negro and Rio Xingu)
<i>Hostmannia</i> (Planchon) Gilg	<i>E. essequibensis</i> Engler	Guyana
	<i>E. elvasioides</i> (Planchon) Gilg	Venezuela (Amazonas, Bolívar), Suriname, French Guiana, Brazil (Pará), Panama, Costa Rica
	<i>E. oligandra</i> Cuatrecasas	Colombia (Norte de Santander)
	<i>E. macrostipularis</i> Sastre & Lescure	French Guiana, Brazil (Amapá, Pará)
	<i>E. sphaerocarpa</i> Cowan	Guyana
	<i>E. bisepala</i> Sastre & Whitefoord	Belize, Honduras
	prov. <i>E. tricarpellata</i> Sastre	Brazil (Bahia)

geographic distributions, are presented in Table 1. Two species are not placed with certainty in the current subgeneric classification: *E. brevipedicellata*, of which the type at B was destroyed (the species is known only from photographs of this type), and *E. tricarpellata*, which is placed provisionally in section *Hostmannia* due to the overall similarity of its young fruits to those of *E. bisepala*. It is clear that section *Elvasia* is fundamentally Amazonian, while section *Hostmannia* is more or less circum-Amazonian and Central American.

Elvasia bisepala Sastre & Whitefoord, in Sastre, Whitefoord & Knapp, sp. nov. TYPE: Belize. Toledo District: Maya Mountains, lower part, Richardson Creek (lower part), affluent of Bladen Branch, 88°46–48'W, 16°33'N, short semi-deciduous dry forest along stream, 100–250 m, 2, 3, 11 Mar. 1987 (fl), *Davidse & Brant* 32340 (holotype, BM; isotypes, BFD, MO, P). Figure 1.

Ab *E. tricarpellata* Sastre foliarum laminis minoribus (6–13 × 2.5–4 cm vs. 8–18 × 4–6 cm), inflorescentiis minoribus (7–9 cm vs. 6–20 cm longiore) et sepalorum numero 2 vs. 3–4 differt.

Trees 6–10 m tall, branches glabrous. Leaves 6–13 × 2.5–4 cm, elliptic to narrowly elliptic, coriaceous, principal vein prominent abaxially, sharply keeled adaxially, the secondary veins fine and parallel, perpendicular with the principal vein; base cuneate or sometimes attenuate, margin with minute, glandular, black teeth, appearing undulate when dry, the apex acuminate; petiole 3–6 mm long; stipules 1.5–3.5 mm long, triangular, entire

or apparently trifid with a stouter central division, appearing tattered and lacinate with age. Inflorescence paniculate, terminal on short stems, 7–9 cm long with 1–5 branches, the branches 2.5–4 cm long, minutely pubescent; bracts similar to the stipules, 1–2.5 mm long, triangular, at branch points and at the base of the flowers; pedicel 4–7 mm long, articulate near the base, very shortly pedunculate. Flowers solitary or occasionally clustered in groups of 2–3, with the sepals 2 (rarely 3), ca. 4 mm diam., subcircular, coriaceous; petals 3–4(–5), 5–5.5 × 4.5 mm, ovate to obovate, membranous, a few somewhat coriaceous at the base; stamens 9–14, the filaments ca. 1.5 mm long, the anthers ca. 2.5 mm long, dehiscence porose; ovary depressed-globular, tricarpellate; style single, (2–)3–4 mm long. Fruit 1–2-loculate by abortion, subglobular, 8–10 mm diam., leathery (?), the style base persistent.

Distribution. In semi-deciduous forests in Belize and adjacent Honduras, 100–350 m.

Elvasia bisepala differs from *E. tricarpellata* in its smaller leaf blades (6–13 × 2.5–4 cm vs. 8–18 × 4–6 cm), smaller inflorescences (7–9 cm vs. 6–20 cm long), the number of sepals (2 (rarely 3) vs. consistently 3–4) and its Central American distribution. Its globular fruit places *Elvasia bisepala* in section *Hostmannia* (see above, Fig. 1).

Paratypes. BELIZE. **Toledo District:** Maya Mountains S., Bladen Nature reserve, Ek Xux canyon, 16°30'N, 88°55'W, forested canyon bottom with large exposed boulders, 320 m, 18 May 1996 (fl, young fr), *Davidse* 36088 (BM, MO, P), 18 May 1996 (fl), *Davidse* 36096 (BM, MO, P), 20 May 1996 (fr), *Davidse* 36164 (BM, MO, P). HON-

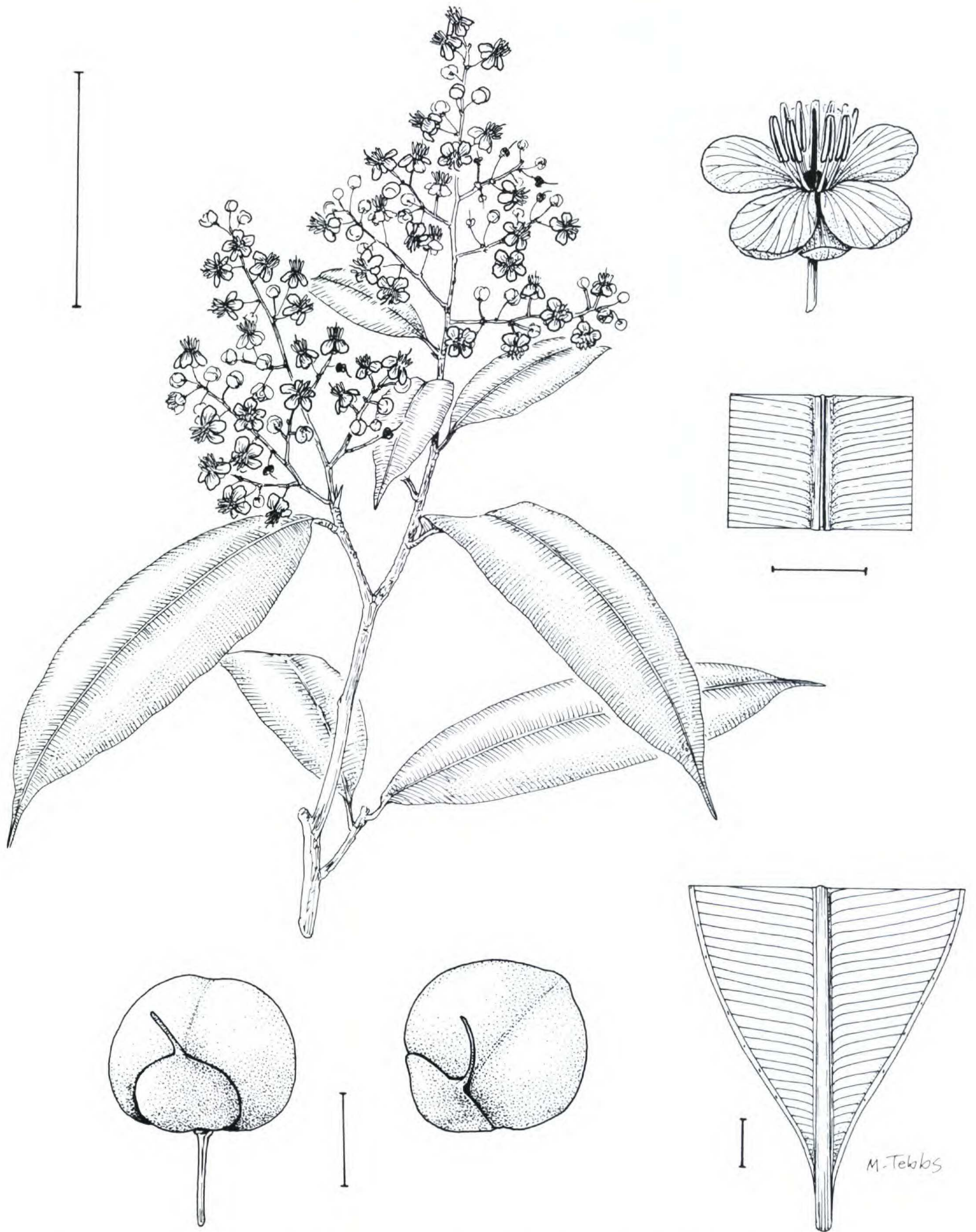


Figure 1. *Elvasia bisepala* Sastre & Whitefoord, from *Davidse & Brant 32340* (BM), with details of flower and fruit. Scale bar in upper left = 5 cm, all others = 5 mm.

DURAS. **Atlántida:** Pico Bonito, base of N, E of new CURLA (Centro Universitario Regional del Littoral Atlántico), 15°42'N, 86°50'W, upland primary forest on slope, 300 m, 14 May 1993 (fr), *Evans 1663* (MO).

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